Identifying Children and Adolescents With Depression: Review of the Stimulus Drawing Task and Draw A Story Research

Rawley Silver, Sarasota, FL

Abstract

This paper reviews a body of research on the author's Silver Drawing Test (SDT) and Draw A Story (DAS) art-based assessments, which span 40 years of development. The original impetus for the assessment is described and studies are reviewed that examined relationships between depression, abuse, and aggression; cognitive skills; interrater and retest reliability; normative data; and treatment outcomes in the United States, Thailand, and Russia. Findings from these studies suggest that drawing responses that are strongly negative (receiving of a score of 1 out of a total possible 5 points) on both the Emotional Content and the Self-Image scales can provide early identification of children and adolescents who may be at risk for depression.

Introduction

Making accurate assessments that allow for early identification of depression among children and adolescents, whose condition may be concealed, is a difficult task for clinicians. Among children, symptoms of depression may be masked by anger, and among adolescents, suicide has become a leading cause of death. This paper reviews a body of research that studied responses to a stimulus drawing task for children and adolescents who were at risk for depression. The art-based assessment tool was found to provide valuable access to participants' fantasies, thoughts, and feelings. The task involves instructing participants to select two drawings from a series of people, animals, places, and things (referred to as stimulus drawings) and then asking them to imagine something happening between the subjects of the drawings they had chosen and to draw what they imagined. The participants also are asked to add titles or stories to their drawings and to discuss their responses whenever possible, so that the researcher may have a clear understanding of overt and covert meanings.

Experience with the stimulus drawing task shows that different participants perceive the same stimulus drawings differently and they tend to choose images associated with

Editor's note: Rawley Silver, EdD, ATR-BC, HLM, is a retired adjunct faculty member of the College of New Rochelle in New York, and grant recipient from the U.S. Office of Education, the New York State Department of Education, and the National Institute of Education. Reproductions of specific drawings described in this article may be found in the Silver Drawing Test and Draw A Story (Silver, 2007).

past experiences—behaviors that reveal perceptions of themselves and relationships with others that can be quantified. Researchers score the drawing responses for emotional content and self-image on two scales that range from strongly negative, such as drawings about suicide or homicide (1 point); to strongly positive, such as those that depict loving relationships or achieving success (5 points). Moderately negative and positive drawing responses score 2 and 4 points respectively; unclear or ambivalent responses are scored 3 points.

In the original study (Silver, 1963) I offered the task to deaf children who could not talk or understand speech. Because I could not communicate with them manually using the means they preferred, I decided to make a quick sketch of my family and gesture an invitation to reply. The children's responses to my sketch provided clues to their concepts of themselves and others. For example, one girl drew herself isolated from others in her family using the visual barrier of a tree (Silver, 1963). Subsequently, I offered the stimulus drawing task to adult stroke patients and also to children and adolescents with learning disabilities (Silver, 1973, 1975, 1976, 1989). Fifty of these stimulus drawings were included in the Stimulus Drawings and Techniques (Silver, 1991), and 15 stimulus drawings were in the Silver Drawing Test of Cognitive and Creative Skills (Silver, 1996). The Stimulus Drawing Task (SDT) includes three tasks—drawing from imagination, predictive drawing, and drawing from observation—that were each designed to assess one of the three concepts said to be fundamental in reading, mathematics, and everyday life: concepts of space, sequential order, and class inclusion (Piaget, 1970).

Some participants drew fantasies that suggested they might be depressed. For example, Charlie (pseudonym) drew smiling faces and leafy trees when he was 11 years old, but at age 14, he began to draw crying faces and fallen trees with leafless, broken limbs (Silver, 1989). After other adolescents responded to the "drawing from imagination" task with suicidal fantasies, I focused the research on whether it could be used to screen for depression, and in 1988 developed the *Draw A Story* (DAS) assessment. Both assessments present the same task (drawing from imagination) but with two different sets of pre-printed stimulus drawings, Form A and Form B, with 12 to 15 stimulus drawings in each. The Form A sets are used in pre- and post-testing, to be presented at the beginning and the end of a program

SILVER 175

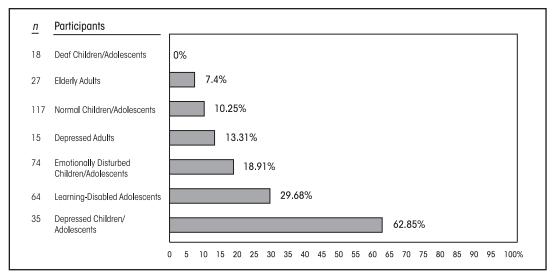


Figure 1 Drawings Rated Strongly Negative in Response to the Draw A Story Task (N=350)(Silver, 1988)

to assess its outcome. The Form B sets are provided for all other purposes.

Review of the Literature

The initial studies were based on the observations of Beck, Rush, Shaw, and Emory (1987), who cited research that investigated how negative perceptions about the world, the future, and the self play a major role in depression. McKnew, Cytryn, and Yahraes (1983) found that some children and adolescents mask depression with antisocial behavior, and may be misdiagnosed as a result.

Diagnostic criteria from the *Diagnosis and Statistical Manual of Mental Disorders* (American Psychiatric Association, 1994) associate depressive disorders in people with feelings of hopelessness and recurrent thoughts of death. This principle served as the basis for developing criteria for assessing drawings. Unlike depressed adults, who tend to suppress their angry feelings, depressed children and adolescents do not suppress anger (Connor, 2002). Connor found that the prevalence of depression increases from childhood to adolescence and varies by gender, with higher rates of depression among adolescent girls.

In recent research, neuroscientists have used magnetic resonance imaging (MRI) to track mirror neurons, which may be involved in the projective process of selecting and identifying with a drawing in the stimulus drawing task. Mirror neurons are a fundamental brain mechanism that detects mental states, including the ability to empathize with the behavior of others as well as to understand another's emotions, intentions, and actions (Gallese, Keysers, & Rizzolatti, 2004). This ability is a function of feelings rather than reasoning and is activated when we experience or observe emotions or purposeful actions. According to Freedberg and Gallese (2007), however, the implications of mirroring mechanisms for empathetic responses to images in general, and works of visual arts in particular, have not yet been assessed.

Studies That Assessed Depression

To determine whether strongly negative responses to the drawing task might be associated with clinical depression and whether they persisted over time, 24 art therapists, teachers, and counselors volunteered to present the Draw A Story (DAS) drawing task to students in public elementary and secondary schools in Arizona, Montana, New Jersey, New York, and Pennsylvania (Silver, 1988, 1989). Drawings were collected from a total of 350 participants, including 35 children and adolescents who previously had been identified as clinically depressed, 74 who had emotional disturbances with non-depressive psychopathology, 64 with learning disabilities, 18 with hearing impairments, and 117 with no known impairments. In addition, the sample included 15 adults diagnosed with depression, 27 senior adults, and 24 children and adolescents who responded to the DAS on two occasions. As shown in Figure 1, 63% of the children and adolescents who were identified as depressed drew strongly negative responses to the DAS task (scored 1 point) as compared to 10% of the students and 7% of the adults who had no known depression.

As an example of a strongly negative response, Paul (pseudonym) was 15 years old at the time of the study and had been diagnosed as clinically depressed. He chose two stimulus drawings of a knife and of a man smoking a pipe. His drawing response depicted the man stabbing his chest and kneeling on the floor of a prison cell with blood dripping from the knife (Silver, 2007). For his story, he wrote:

Mr. Henderson was found guilty of murdering his wife, who he was married to for four years, and got sent to Ryker's Island where he was to stay for 50 years. After two weeks there, he got beaten, stabbed and raped by his inmates. Since he couldn't take any more abuse, he decided to take a knife and stab himself to death with it. He enjoyed his last smoke before he died.

Although drawings with strongly negative content do not necessarily indicate depression and, conversely, draw-

ings with positive content do not exclude depression, the findings from this study suggested that a child or adolescent whose drawing responses were scored 1 point may be at risk for depression. The assessment may be used to identify this risk and the need for further evaluation by mental health professionals.

Reliability of the Emotional Content Scale

In the first study of the DAS that tested rater reliability 3 registered art therapists were asked to score 20 unidentified drawing responses to the DAS Form A. The sample was chosen at random from drawings by children and adolescents identified as having clinical depression, emotional disturbances, or learning disabilities, as well as by children and adolescents with no known impairments who responded with strongly negative fantasies on two occasions (Silver, 1988). Before scoring the sample the raters practiced with a different group of drawing responses for one hour, and then scored the 20 responses blindly and independently. A psychologist analyzed the results and found significant correlations between raters. Between raters A and B the correlation coefficient was .806 (df = 18, p < .001), between raters A and C it was .749 (df = 18, p < .001), and between raters B and C it was .816 (df = 18, p < .001).

A second study assessed the degree of agreement between two raters who scored, independently and blindly, drawing responses to the DAS Form B by 33 children, adolescents, and adults (Waterfield, 1993). Some of these respondents had impairments; others had none. Waterfield also found that the interrater reliability correlations were significant: the correlation for A scores was .839, p < .001; for B scores it was .740, p < .001; and for A and B scores combined it was .808, p < .001.

In the first study of the DAS that investigated retest reliability, the DAS Form A task was presented twice to 24 children who had no known impairments and to 2 adolescents who were diagnosed as having depression. The latter received the same scores on both occasions (Silver, 1988). Subsequently, in a second study that measured retest reliability 3 registered art therapists presented the task twice to 31 children and adults (Silver, 1993a, 1993b). One art therapist presented the task to 8 children with emotional disturbances, another presented the task to 6 adolescents with emotional disturbances, and the third art therapist presented the task to 17 adults. Significant correlations again were found between first and second drawing responses (.703, p < .001), between the 8 children with emotional disturbance (.933, p < .001), and between the 23 adolescents and adults who responded twice (.451, p < .05). These findings indicate that the Emotional Content scale has interrater as well as retest reliability.

Reliability of the Self-Image Scale

The first study to test the reliability of the Self-Image scale examined the drawing responses of 261 children and found that, to a highly significant degree (p < .001), they contained fantasies about people whom the children identi-

fied as having the same gender as themselves (Silver, 1992). A second study expanded the number of participants in the sample to 531 adults, adolescents, and children, finding that they also chose to draw subjects with the same gender as themselves to a highly significant degree (Silver, 1993a). In addition, this study found significant age and gender differences in participants' attitudes toward self and others.

A third study by Silver and Ellison (1995) investigated whether art therapists could identify self-images in response to the drawing task blindly, that is, without meeting or talking with the individuals who drew them or with the other rater. Ellison, a registered art therapist, presented the DAS Form B task to 53 youths aged 13 to 18 years old, interviewed them individually, and asked them to identify characters in their drawings that might represent themselves. Of the 53 adolescents in the sample, 39 identified characters in their drawings as representing themselves. Ellison sent these adolescents' drawings to Silver, who scored them blindly. A psychologist analyzed the three sets of evaluations using the level of agreement between the 39 adolescents, Ellison, and Silver as an index of the validity of the self-image measure. Ellison, who knew the youths' histories and conducted the interviews, accurately identified 77% of the self-images of adolescents who created them. Rating the same sample blindly, Silver matched 72%. Between them the agreement was 94.3%, suggesting interrater reliability.

Although 3 out of 4 adolescents (74.4%) had drawing responses that were accurately matched by both art therapists, there were 2 drawings that Ellison matched that Silver, who had not interviewed the adolescents in the sample, did not match. This finding indicates the importance of discussing drawing responses with those who drew them, whenever possible. On the other hand, there were 5 participants whose drawing responses were incorrectly matched by both art therapists who nonetheless agreed with each other. For example, Roy (pseudonym) chose stimulus drawings of a dejected person sitting on a chair, a smiling couple with arms entwined, and a sword. In the foreground of his drawing response he drew a man and a smiling woman embracing, with a frowning man standing behind them and a sword nearby. Asked how he imagined the subjects in his drawing might feel, he said that the man was very angry and the couple was very happy. Asked how he would feel if he were one of the characters in his drawing, he replied, "I'm the good guy. I couldn't kill nobody." However, both art therapists had assessed that Roy's angry man represented himself.

In subsequent studies the scales for assessing emotional content and self-image were made more precise (Silver, 2007). To determine whether they were still reliable, four art therapists scored responses by 10 adolescents independently and blindly. Interrater agreements of 80% on the Self-Image scale and 82.5% on the Emotional Content scale suggest that the revised scales also were reliable.

Normative Data

The Silver Drawing Test manual provides norms not only for cognitive skills but also for assessing emotional con-

SILVER 177

tent and self image, based on responses by 812 undiagnosed children, adolescents, young adults, and senior adults residing in the United States (12 states) and Canada (Silver, 2007). Norms make it possible to compare individual scores with typical scores. Individual scores above the mean indicate above-average performance on the task; scores below the mean indicate below-average performance. Percentile ranks and t-scores provide more precise information. Of the 812 responses in the sample studied, 17% of the drawings from males were scored 1 point on emotional content compared with 5% of the females, meaning that they portrayed life-threatening relationships or sad/helpless solitary subjects. On the other hand, 13% of the drawings from females compared with 9% of the males were scored 5 points, meaning that they portrayed caring relationships or effective/powerful individuals. In self-image scores, the converse emerged: 18% of the males, compared with 12% of the females, identified with subjects portrayed as powerful, loved, assaultive, or achieving goals.

Abuse, Aggression, and Depression

Turner (as cited in Dunn-Snow, Turner, & Wilson, 1993) described her use of the DAS with adolescent clients in psychiatric hospitals as helpful in assessing the effects of sexual abuse on a client's defenses, coping skills, relationships, and sense of self. She observed that her clients tended to draw fantasies about helplessness, lifethreatening danger, predatory relationships, and people indifferent to the suffering of others—all of which reflected their worldviews.

In a subsequent study Earwood, Fedorko, Holzman, Montanari, and Silver (2004) found that the experience of abuse might be linked not only with depression but also with aggression. In the study, four art therapists in four schools presented the DAS Form A task to 30 children and adolescents with histories of aggressive behavior, as well as to 181 students with no histories of aggression who served as the control group. These students, aged 8 to 19, attended public elementary and secondary schools in New Jersey and Florida; two schools were located in middle- to upperclass neighborhoods and two were located in lower- to middle-class neighborhoods.

After the drawing responses were scored, one analysis of variance (ANOVA) found that the aggressive group, composed of 25 boys and 5 girls, had lower, more negative scores on the Emotional Content scale than the nonaggressive group, to a degree significant at the .01 level of probability. A second ANOVA found that participants in the aggressive group also had significantly higher scores on the Self-Image scale, with drawings that represented themselves as powerful and effective assailants in fantasies about homicide and life-threatening situations. Significant gender differences also emerged, with the boys having higher self-image scores than the girls.

In addition, 5 of the students in the aggressive group and 8 of those in the control group produced drawings that scored 1 point on both the Emotional Content and the Self-Image scales, with drawings that represented themselves as helpless victims in life-threatening situations, thus raising the question of whether they might be depressed as well as aggressive. To consider this question, the individuals and their drawing responses were examined more closely (Silver, 2005, 2007). One of the 5 students in this group, Victoria (pseudonym; age 17), had been threatening and cruel to other students. She also had been suspended from school for stealing, defying authority, using profanity toward a teacher, and playing with a knife. School records indicated the possibility that she had been abused but little was known about her family background. Victoria chose a stimulus drawing of a parachutist and one of a knife. In her drawing response she changed the image of a parachutist into a balloon with an empty basket, depicted a huge knife approaching the balloon, and drew wavy lines below to represent the ocean. For her story, she wrote girl and then crossed out the word and wrote balloon instead. She wrote that the balloon "was cut with a knife...[and] didn't know it was cut and so it fell into the water and was never found."

Another student whose drawing scored 1 point on both the Emotional Content and the Self-Image scales was Jim (pseudonym), a 14-year-old boy who had been diagnosed at various times with ADHD, major depression, and aggression, and who attended a program for students with severe emotional problems. When frustrated, angry, or sad, he would lash out, place himself in harm's way, or else withdraw. He lived with his biological parents and siblings. School records did not reveal whether he had experienced abuse. For the stimulus drawing task he chose four images: a parachutist, a volcano, a dinosaur, and a castle. In response, Jim drew the parachutist descending through the air and saying "I'm going to die!" while a large dinosaur stands in a small castle with windows like eyes and a door that suggests an open mouth, and volcanoes explode on both sides of the castle. He titled the drawing "When Dinosaurs Rule America," and wrote the following story:

The man ejected in the war with the dinosaurs. The monsters are mutated. His goal is to destroy all living mutated organisms. The plane was shot down by the dinosaur's breath attack. He says he is going to die because the dinosaur is in the castle. He's calling for backup but it won't come for a year.

Joseph (pseudonym; age 10) had been diagnosed with bipolar disorder and ADHD and was identified as verbally and physically aggressive to others. He attended a program at his school for children with exceptional educational needs. His biological father died when Joseph was 7, prior to the onset of the boy's aggressive and defiant behavior. Joseph lived with his mother, her boyfriend, and many siblings in what could be described as a chaotic household. He had been hospitalized several times after talking about suicide and homicide. In the stimulus drawing task he chose pictures of a volcano and a mouse. His drawing response was entitled, "The mouse was killing people from around the world." Joseph then dictated this story:

A man caught the mouse with a trick and put him in the volcano. When the volcano exploded, the mouse came out

and fell into the dinosaur's mouth. The dinosaur didn't die because it came from the volcano.

Two of the total 8 children in the control group drew suicidal fantasies that were scored 1 point on both scales. Nothing specific is known about these students in the control group because they had responded anonymously and could not be identified.

Other Studies Conducted in the United States, Thailand, and Russia

The Clinical Art Therapy Department of the Miami-Dade County Public Schools (Florida) has used the Stimulus Drawing Task (SDT) since 2000 as part of their assessment protocol. The SDT is administered to students before they begin art therapy and again at the end of the school year, and the Draw A Story assessment (DAS) is administered as a follow up to students whose drawings score 1 point on both the Emotional Content and Self-Image scales, or 1 point on the Emotional Content scale and 5 points on the Self-Image scale (Silver, 2007).

Lanette (pseudonym; age 12) was part of the experimental group of aggressive students in a study conducted in the Miami-Dade schools (Silver, 2007) and her drawings were scored 1 point on both scales. For her first drawing response, she chose stimulus drawings of a cat and a mouse. Although the stimulus drawings depict a cat that scowls and a smiling mouse with its tail pointing down, Lanette's response drawing depicts a smiling cat with its tail pointing up. Between the cat and the mouse she wrote, "men, men, men." Her drawing scored 2 points on both the Emotional Content and Self-Image scales because the relationship between the two figures seemed stressful rather than life threatening (Silver, 2005).

For her second drawing response Lanette chose stimulus drawings of a snake and a princess bride. She drew the bride with no arms and the snake approaching the bride's groin. For her story, Lanette related, "There was a girl and a snake and the snake was attacking her and she said, 'Help me!" This response suggested that her drawing may have symbolized sexual abuse; it was scored 1 point on both scales.

As reported by her art therapist, Melinda Fedorko, Lanette chose the cat and mouse stimulus drawings again two months later, but in her third drawing response, her cat does not smile. As she dictated, "The cat is chasing the rat, and the rat ran inside its home. The cat couldn't get him so he waited outside for the rat but it didn't come out no more." In her drawing, however, the mouse appears to be outside, about halfway between house and cat. Because her drawing seemed to contradict her words, it scored 3 points on both scales. Eighteen months after her first response Lanette made her final drawing. Her story:

One day there was a mouse and a refrigerator. He went to get some food to eat and a man walked into the kitchen and saw the mouse and the mouse ran back into its home. So the man had some people to get all the mice out of his home.

Near the bottom of her sketch Lanette drew a stick figure saying, "Thank you... for helping me." It is not clear who is expressing gratitude: the man thanking the exterminator, Lanette thanking her therapist, or perhaps both. Even so, unlike her pre-test assessment, in which she depicted helpless victims, Lanette's post-test response describes symbolically the idea of solving problems with professional help, and scored 3.5 points on both scales. Because her post-test score is higher or more positive than her pre-test score, it provides her therapist with quantified evidence that the art therapy interventions were effective.

In Thailand, Dhanachitsiriphong (1999) used the SDT as a pre- and post-test to determine the effects of art therapy and rational emotive therapy on the emotional and cognitive development of incarcerated youths. From a sample of 100 youths she chose drawings that were assessed as containing emotional content lower than the percentile rank of 25 (thus indicating a high risk of depression) and another set of drawings with cognitive scores that were higher than the percentile rank of 75. After dividing the drawings' creators into experimental and control groups, with 6 in each group, Dhanachitsiriphong provided the experimental group with a 12-session, 3-month art therapy program while the control group continued with regular activities. On the post-test, the cognitive and emotional scores of participants in the experimental group were higher than those of participants in the control group to a degree significant at the .01 level in each of the 8 categories under consideration.

In the experimental group, Komsan (pseudonym; age 18) chose a stimulus picture of a dog and one of a cat on the pre-test. He explained that big boys in the Center always have power over smaller boys and that he liked to see dogs fighting cats, saying that he imagined throwing a cat to his dog. His drawing was scored 1 point on both the Emotional Content and Self-Image scales. For his second drawing response, he chose stimulus drawings of a boy and a snake. Describing his drawing response, he said that "a snake was coming to bite me." Komsan added that he was depressed because a big boy always hit him and made fun of him, that he had to be aware of himself all the time, and that he would like to take revenge. His drawing scored 1 point on both scales.

For his post-test, Komsan chose stimulus drawings of a boy and a dog, and explained that a boy was "playing with a dog happily." For his fourth and final drawing response, he chose images of a boy, a tree, and a bug, and then drew a picture that he titled, "A boy was watching beetles flying under the tree happily," scoring 4 points on both scales. His higher, more positive scores on the post-test provided evidence that art therapy had been effective.

Kopytin, a Russian art therapist and psychiatrist who has translated the Stimulus Drawing Task and the Draw A Story assessments for publication in Russia, reported the findings of a colleague who presented the DAS task to experimental and control groups of war veterans (personal communication, December 12, 2008). The 60 patients in the experimental group participated in an interactive art therapy program for 1 month; the 40 patients in the control group participated in an occupational therapy pro-

SILVER 179

gram for 1 month. Kopytin found that the average cognitive, emotional content, and self-image scores increased in the experimental group, whereas only the emotional content scores increased in the control group. In addition, Kopytin found negative correlations between scores on the Beck (1978) Depression Scale and the DAS scores. Because these scales proceed in opposite directions, a negative correlation further establishes the utility of the DAS to assess for depression.

Kopytin (2002) conducted a normative study of the SDT with the assistance of 11 Russian psychologists who collected the samples, administered the tasks, and analyzed the findings. They found that ambiguous, unemotional, or unclear responses (scored 3 points) predominated in the sample. They also found that positive self-images were more frequent among female participants than male participants, unlike their U.S. counterparts. In emotional content, however, Kopytin's group found negative themes more frequently among males and positive themes more frequently among females, much like their U.S. counterparts.

Russian investigators also examined the DAS assessment for children and adolescents who had histories of conduct disorders as compared to those who did not (Kopytin, Svistovska, & Sventskaya, 2005). They presented the DAS task to 27 children and adolescents (21 boys and 6 girls, ages 10 to 14) who had been abandoned or taken from their parents and raised in residential institutions. Several had attempted suicide and all had been aggressive in their conduct toward others. To develop a control group the researchers matched and assessed 25 children and adolescents without diagnoses of conduct disorder who also lived in institutions.

The researchers found that no child or adolescent drew strongly positive fantasies that would have scored 5 points in either emotional content or self-image, and no significant cultural differences appeared in drawings assessed on the Emotional Content scale. Similarities appeared in the proportion of respondents who drew strongly negative fantasies that were scored 1 point on both the Self-Image and Emotional Content scales, which suggested depression. In the Russian study, 19% of the aggressive adolescents and 4% of those in the control group scored 1 point on both scales, as compared to a similar study conducted in the United States where 17% of the children and adolescents in the aggressive group and 4% of those in the control group scored 1 point on both scales (Silver, 2005). In addition, the participants in the control groups in both countries expressed more positive feelings than the participants in the experimental groups, receiving higher scores on both scales.

In self-image scores, however, highly significant cultural differences emerged at the .001 level of probability. Although 5 of the 30 U.S. adolescents seemed at risk for depression, scoring 1 point on both scales, the group of U.S. adolescents received higher scores than the group of Russian adolescents. This finding may reflect cultural differences, or perhaps differences between living at home with one's family, as was the case with the U.S. participants, and living in a psychiatric hospital, which was where the Russian adolescents were tested. On the other hand,

both groups tended to draw sad fantasies, rather than aggressive ones. Kopytin, Svistovska, and Sventskaya (2005) concluded that DAS provided a valid instrument for assessing emotional needs and was helpful in understanding perceptions of self and others, in establishing rapport, and in providing interventions to reduce the risk of destructive or self-destructive behaviors.

Conclusion

The studies reviewed in this paper collectively indicate that strongly negative responses to the drawing task (scoring 1 point on both the Emotional Content and Self-Image scales) can identify children and adolescents who may be depressed so that they may be helped in time and possible suicides may be prevented. The studies provide quantitative evidence that the Self-Image and Emotional Content scales have interrater and retest reliability, and higher, more positive post-test scores offer evidence that an art therapy program has been effective. The Stimulus Drawing Task (SDT) and Draw A Story (DAS) art-based assessments may be helpful to art therapists in providing early identification of children and adolescents who may be at risk for depression.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders.* (4th ed.). Washington, DC: Author.
- Beck, A. T. (1978). The depression inventory. Philadelphia: Center for Cognitive Therapy.
- Beck, A. T., Rush, J., Shaw, B. F., & Emory, G. (1987). *Cognitive theory of depression*. New York: Guilford Press.
- Connor, D. F. (2002). Aggression and antisocial behavior in children and adolescents. New York: Guilford Press.
- Dhanachitsiriphong, P. (1999). The effects of art therapy and rational emotive therapy on cognition and emotional development of male adolescents in Barn Karuna Training School of the Central Observation and Protection Center. Unpublished master's thesis, Burapha University, Chonburi, Thailand.
- Dunn-Snow, P., Turner, C., & Wilson, M. (1993). *Using the Draw A Story assessment in school, hospital, and private practice.*Paper presented at the 24th Annual Conference of the American Art Therapy Association, Atlanta, GA.
- Earwood, C., Fedorko, M., Holzman, E., Montanari, L., & Silver, R. (2004). Screening for aggression using the Draw-a-Story assessment. *Art Therapy: Journal of the American Art Therapy Association*, 21(3), 115–161.
- Freedberg, D., & Gallese, V. (2007). Motion, emotion, and empathy in esthetic experience. *Trends in Cognitive Science*, 11(5), 197–203.
- Gallese, V., Keysers, C., & Rizzolatti, G. (2004). A unifying view of the basis of social cognition. *Trends in Cognitive Science*, 8(9), 396–403.

- Kopytin, A. (2002). The Silver Drawing Test of cognition and emotion: Standardization in Russia. American Journal of Art Therapy, 40(4), 223–237.
- Kopytin, A., Svistovska, H., & Sventskaya, V. (2005). Cultural differences and similarities. In R. Silver (Ed.), Aggression and depression assessed through art (pp. 141–158). New York: Brunner-Routledge.
- McKnew, D. H., Cytryn, L., & Yahraes, H. (1983). Why isn't Johnny crying? Coping with depression in children. New York: W. W. Norton.
- Piaget, J. (1970). Genetic epistemology. New York: Columbia University Press.
- Silver, R. (1963). Art for the deaf child—its potentialities. *The Volta Review*, 65(8), 408–413.
- Silver, R. (1973). A study of cognitive skills development through art experiences. New York City Board of Education. State Urban Education Project Number 147 232 101, 3-4.
- Silver, R. (1975). Clues to cognitive functioning in the drawings of stroke patients. *American Journal of Art Therapy, 15*(1), 3–8.
- Silver, R. (1976). Using art to evaluate and develop cognitive skills. *American Journal of Art Therapy, 16*(1), 11–19.
- Silver, R. (1988). Screening children and adolescents for depression through Draw a Story. *American Journal of Art Therapy*, 26(4), 119–124.
- Silver, R. (1989). Developing cognitive and creative skills through art. (3rd ed. Rev.). Sarasota, FL: Ablin Press Distributors.

- Silver, R. (1991). Stimulus drawings and techniques in therapy, development, and assessment (4th ed. Rev.). Sarasota, FL: Ablin Press Distributors.
- Silver, R. (1992). Gender differences in drawings: A study of selfimages, autonomous subjects, and relationships. *Art Therapy: Journal of the American Art Therapy Association*, 9(2), 85–92.
- Silver, R. (1993a). Age and gender differences expressed through drawings: A study of attitudes toward self and others. *Art Therapy: Journal of the American Art Therapy Association*, 10(3), 159–168.
- Silver, R. (1993b). Draw A Story: Screening for depression and age or gender differences. Sarasota, FL: Ablin Press Distributors.
- Silver, R. (1996). Silver Drawing Test of cognition and emotion (3rd. ed. Rev.). Sarasota, FL: Ablin Press Distributors.
- Silver, R. (Ed.). (2005). Aggression and depression assessed through art. New York: Routledge.
- Silver, R. (2007). The Silver Drawing Test and Draw A Story: Assessing depression, aggression, and cognitive skills. New York: Routledge.
- Silver, R., & Ellison, J. (1995). Identifying and assessing selfimages in drawings by delinquent adolescents. *The Arts in Psychotherapy*, 22(4), 339–332.
- Waterfield, M. L. (1993). Assessing test-retest and inter-rater reliability of the Draw a Story stimulus drawings, Form B. Unpublished master's thesis, University of Florida, Tallahassee.

CORRECTION

The Special Anniversary Issue of *Art Therapy: Journal of the American Art Therapy Association*, Volume 26, Number 3 (2009), misidentified the associate editors who served the journal during Editor Cathy Malchiodi's tenure. Patricia St. John, EdD, ATR-BC, LCAT, was Associate Editor from 1992-1995. Susan Spaniol, EdD, ATR-BC, LMHC, was Associate Editor from 1996-2001. We apologize for the error.